

STANFORD UNIVERSITY SCHOOL OF MEDICINE

STANFORD MEDICAL CENTER
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DEPARTMENT OF GENETICS
Professor Joshua Lederberg

September 21, 1965

Area Code 415
321-1200

Dr. John Z. Bowers
President
Macy Foundation
16 West 46th Street
New York, New York

Reference: Planning for Advanced Computer Facility at Stanford Medical School

Dear John:

Shortly after your phone call, I consulted Dean Glaser. You will not be surprised that he was as pleased as I was to learn of your positive interest in our hopes to establish "ACME", a first rate computer facility and data network. At present we are completing a proposal to NIH for the computer. We do not believe we can hope for more than \$500,000 a year, perhaps beginning April 1, 1966, from this source.

In planning the budget for this, we find a definite hiatus - in start-up time and in staff for system planning. We would therefore be very much relieved to be able to have a grant of \$80,000 for the calendar year 1966, intended for the following purposes, mainly staff appointments which we hope to fill as promptly as possible, and can expect to be able to start, on the average, the first of the year:

	<u>Base Salary</u>	<u>Fringe Benefits</u>	<u>Total</u>
Director for ACME	\$20,000	\$1,700	
Sr. Electrical Engineer	18,000	1,530	
Electrical Engineer	<u>15,000</u>	<u>1,270</u>	
	\$53,000	\$4,500	\$57,500
Installation & Operating Expenses, including cabling and test equipment			<u>\$22,500</u>
			<u>\$80,000</u>

We are pushing hard to get ACME working by May. The early appointment of the planning group, which these funds would support, is an obvious necessity for an orderly program that can take full, efficient advantage of costly facilities promptly on their installation. These personnel are eminently employable on other projects, but we should have coverage of a year's salary before recruiting them.

The Director would be a computer systems engineer, or a programming system analyst. The engineers would be telemetry or communications specialists. The salaries are relatively high, but not in relation to the responsibility and performance demanded and to the market for such skills. Their main functions in the pre-installation period will be:

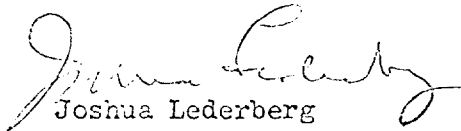
1. Planning the physical installation
2. Consulting with medical school faculty on the services to be set up, and training their technicians
3. Designing the data network, i.e., the most effective media for collecting data from many participating laboratories for ACME. The technical decisions might be hard wires (twisted pairs to coaxial cable), phone lines, paper or magnetic tape or graph charts carried to the computer, etc.
4. Installing and testing hard wire connections. From a few previous experiences, this always takes weeks in practice versus days in principle. Indoctrination of experimenters how to use their terminals and how to hook up their instruments to them.
5. Specifications to other users on compatible recording equipment.
6. Negotiate with IBM on details of equipment and its delivery.
7. Inform faculty on programming systems and details of services: "how to use the computer".

Some of these functions may be good academic challenges in "biomedical engineering" and we will steer this new program of the Engineering School our way as much as possible.

The administration of these funds will be in the hands of the Computer Policy Committee.

We feel that a year's production and time for maneuver will get us on a very firm footing - we already have quite a few irons in the fire - but I will of course not guarantee that we will not look to you for help to move up another step. Meanwhile a proportionately small amount of money will be most useful just because of the speed that you can react to our needs.

Many thanks, and best wishes,



Joshua Lederberg
Professor of Genetics
(Chairman, Computer Policy Committee)

Enclosure: Notes on NIH application for ACME.

cc: Dr. Robert J. Glaser
Dean, School of Medicine

P.S. Are you able to consider a hopefully nominal, second use of these funds - namely an insurance against catastrophe - that would help us move briskly. For example, an unexpected delay in NIH funding could throw our whole plan out of kilter and we might then ask whether we can use these funds somewhat differently for an emergency bailout. Alternatively, there may be a period after we have informal confirmation but before formal award which overlaps the gestation time of the order to IBM. It would be advantageous to have this appear on our books as a charge to the Macy Foundation grant; only very bad luck or miscalculation would end up as an actual outlay for this purpose.